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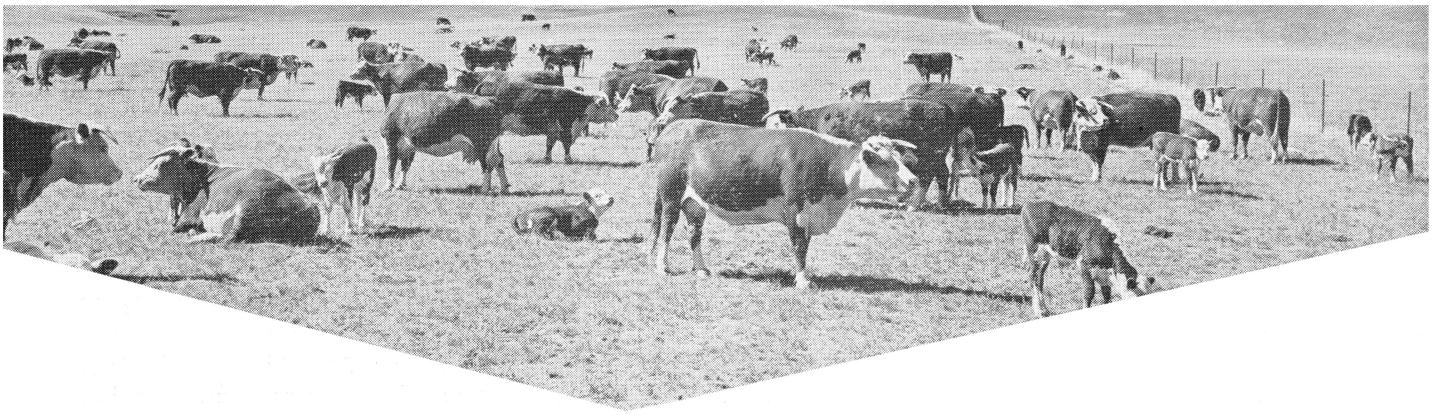
PRE-CONDITIONING: Preventive Veterinary Medicine

John B. Herrick
Iowa State University



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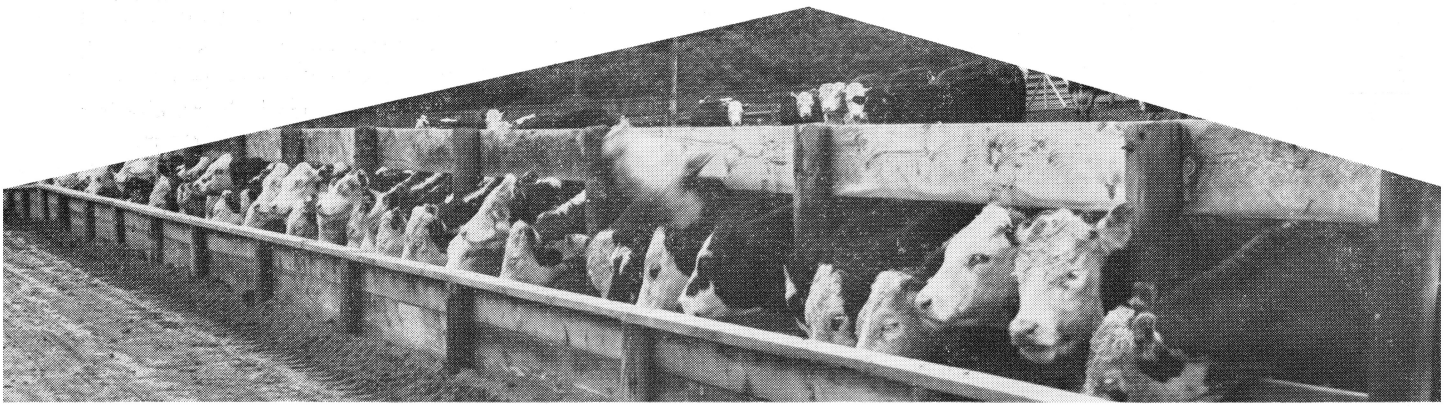


by John B. Herrick

LOSSES DUE to stress on feeder cattle are costing Iowa's livestock industry literally millions of dollars each year, a survey conducted by the Iowa State University College of Veterinary Medicine reveals. Nationally, the losses must be counted in hundreds of millions.

The ISU survey and other studies bring the problem into focus rather forcibly. The question then becomes, what can be done to reduce these losses and dollar wastes.

One suggestion is the pre-conditioning concept which has been pioneered at Iowa State University. Simply, pre-conditioning is a program designed to prevent losses in the cattle industry by preparing animals to withstand the stress of movement from ranch or farm to feedlot. In operation, however, the program is a little more complex.

Essentially pre-conditioning is a system of preventive medicine. But to be effective it must be standardized nationally, because of the inter-state movement of many feeder cattle. To be standardized nationally, it must be clearly defined. And finally, to guarantee loss reduction, the pre-conditioning must be certified.

An example of the need for certification occurred right here at Iowa State recently. The university purchased feeder cattle for one of its experimental farms with the understanding that the animals had been treated for grubs. Later, it was discovered the animals had not been treated as believed—there had been a misunderstanding.

In this case, all was not lost. Scientists were at least able to make an accurate study of losses due to grubs (See "Grubs Eat into Cattle Profits," *Iowa Farm Science*, September, 1968). With the preconditioning program, such misunderstandings cannot develop because the treatment date is recorded, the material used is specified and the treatment is certified by a licensed veterinarian.

Supervision Needed

Related to the certification aspects of the program is the supervision of the pre-conditioning program. Dramatically improved biologics and drugs for the prevention and treatment of disease have been contributed by modern veterinary science. Yet, the most benefit possible has not been obtained from these materials because they have never been incorporated into a systematic program to control diseases in the feeder cattle industry.

Pre-conditioning involves more than just immunization of feeder cattle—but proper immunization is one of the foundations of the program.

Certification of a pre-conditioning program and supervision by practicing veterinarians will assure buyers that cattle have been properly treated prior to shipment. At present, statements that animals have been vaccinated by other persons are creating other problems. Buyers should not accept statements

JOHN B. HERRICK is professor of veterinary medicine and extension veterinarian.

regarding immunization unless the statements are certified.

Modern vaccines must be administered exactly according to manufacturers' recommendations. If they are not, efficiency is lost, and harm can result in some cases. Consequently, veterinary supervision is essential to avoid such abuses in the pre-conditioning program such as vaccinating animals at too early an age (a widespread problem); improper administration of vaccines (many times the vaccine is not injected in the proper site); vaccination of acutely sick animals; and use of biologic agents which have not been properly stored.

Pre-conditioning Program

The pre-conditioning program contains 7 specific steps and procedures for preparing animals for the stress of moving to feedlots. These steps include:

1. **Wean animals 30 days before shipment. Castration and branding should be done prior to weaning.**
2. **Put animals on a "trough and bunk" adjustment period of 30 days. Medicate only on a veterinarian's recommendations. Cattle should receive a 14 percent protein ration and ample clean water during this period.**
3. **Two weeks after weaning, calves vaccinated for blackleg and malignant edema and leptospirosis before 3 months of age should be re-vaccinated. At the same time vaccinate for "red nose" (infectious bovine rhinotracheitis or IBR), bovine virus diarrhea, and para-influenza 3 (SF-4). Follow veterinarian's recommendation for vaccination procedures.**
4. **Treat for grubs with spray, pour-on materials, or with a feed additive.**
5. **Check feces for worm eggs. Worm if necessary.**
6. **Wait 10 to 14 days, then move animals to the feedlot. If shipped by rail, rest animals 12 hours after 24 hours of travel; if trucked, rest animals 12 hours after 36 hours of travel.**
7. **Have the preceding treatments certified by a veterinarian.**

How is the pre-conditioning program working? So far, evidence obtained from feeder herds which have been properly pre-conditioned, indicates death loss is reduced, there are fewer sick animals, a decrease in the severity of illness, and those animals which become sick respond better to treatment. In a recent survey, 4 out of 10 feeders indicated they want to buy pre-conditioned cattle.

Cattle feeders who have purchased only pre-conditioned cattle have found the program to be effective insurance against the possibility of catastrophic losses from death and sickness, which have made feeding a traditionally high risk industry.

Viewed as insurance, the current premium that feeders pay for pre-conditioned feeder cattle is justified—at least for the time being. It is likely that if commercial and farm feeders insist that calves they purchase are pre-conditioned, selling prices will eventually be established on the basis of pre-conditioning. Eventually—though this may be merely a point of view—it will appear that pre-conditioned cattle are not worth more, but animals that are not pre-conditioned are worth correspondingly less.

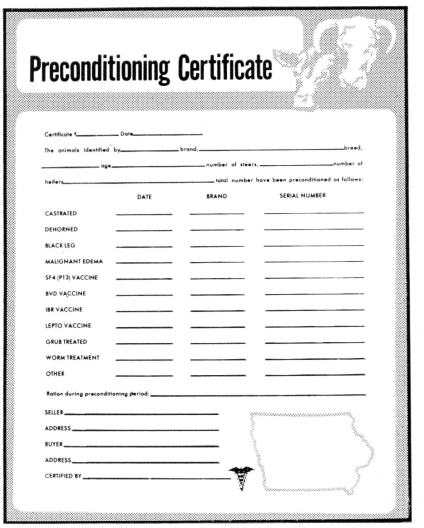
Pre-conditioning of feeder animals is a sound veterinary medical and management approach to solving a mammoth problem. It is becoming widely accepted in the veterinary profession and the cattle industry. Already, the standards of the pre-conditioning program have been incorporated in the recommendations of many livestock organizations, biologic houses and feed companies.

Universal adoption of pre-conditioning appears to be on its way. As more cattle feeders recognize fully the losses under the past system of handling feeder cattle, industry economics will speed the change. But one more change may be needed.

Regulations regarding transportation of livestock still permit transportation of over-stressed, sick, or imminently sick animals. Federal and state regulations need to be strengthened to curb these abuses. At present the movement of stressed and ill animals is almost unrestricted and these animals can transmit disease to healthy animals.

To adequately control movement of animals, a national cattle identification system may be needed. Every calf dropped may need a bovine "social security" number. Today, the movement of many animals from ranch to public sale yard to feedlot cannot be traced.

Without a means of cattle identification, the needed regulation of animal movement is not feasible. And for the near future, it appears the movement and sale of diseased feeder animals could worsen unless checked. Law suits generated by the sale of diseased animals are already increasing.


Preconditioning Certificate

Certificate #_____ Date_____

The animals identified by_____ brand_____ breed,

_____ age_____ number of steers_____ number of

heifers_____ total number have been preconditioned as follows:

	DATE	BRAND	SERIAL NUMBER
CASTRATED			
DEHORNED			
BLACK LEG			
MALIGNANT EDEMA			
SF4 (PI3) VACCINE			
BVD VACCINE			
IBR VACCINE			
LEPTO VACCINE			
GRUB TREATED			
WORM TREATMENT			
OTHER			

Ration during preconditioning period: _____

SELLER_____

ADDRESS_____

BUYER_____

ADDRESS_____

CERTIFIED BY_____

Sample pre-conditioning certificate.

At present, cattle feeders have the tool in pre-conditioning to take a major step in curbing losses in the feedlot. The next tool needed will be the one to regulate movement of animals which serve as disease sources.

And while the cattleman may prefer the freedom to move his cattle when and where and how he pleases, the small cost of pre-conditioning and the inconvenience of meeting shipping regulations will be a small price to pay to save the industry the losses it now bears.